

**REPORT OF ACTIVITIES
OF THE
DEPARTMENT OF WATER RESOURCES**

By

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WATER CONDITIONS

After a relatively dry fall, the second half of December turned wet. This began a very wet pattern that lasted into early January, bringing floods and high water to many locations in Northern California, along with very high tides in the Delta. During December, the Northern Sierra 8-Station Index gained 26.0" of precipitation, which is 310% of normal for the month and just over half of the Index's average annual total of 50 inches. As of January 10, the 8-Station Index has gained 3.8" of precipitation during the month, which is 42% of average of the monthly total. This brings the 8-Station's seasonal total up to 37.8", which is 186% of average to date. The 8-Station's percentage of average for a total Water Year (50.0") is 76%.

Statewide hydrologic conditions for California as of January 1, for Water Year 2006, were as follows: precipitation, 145% of average to date; runoff, 195% of average to date; and reservoir storage, 135% for the date. Sacramento River Region unimpaired runoff observed since October 1 through December 31 was 6.2 million acre-feet (MAF), which is 189% of average. (On December 31, 2004, the observed Sacramento River Region unimpaired runoff since October 1, 2004 was 2.4 MAF.) Statewide unimpaired runoff for December was about 285% of average for the month, and ten rivers exceeded 300% of the month's average.

Selected Cities Precipitation Accumulation as of 1/02/2006					
	Jul 1 to Date 2005 - 2005 (in inches)	% Avg	Jul 1 to Date 2004 - 2004 (in inches)	% Avg	% Avg Jul 1 to Jun 30 2005 - 2006
Eureka	24.42	150	19.50	120	64
Redding	21.33	178	19.01	158	63
Sacramento	12.30	175	12.27	174	61
San Jose	7.86	154	8.65	169	52
Fresno	5.06	145	6.40	183	45
Bakersfield	2.59	134	2.81	145	39
Los Angeles	4.72	119	13.53	342	31
San Diego	1.29	39	9.33	285	11

Key Reservoir Storage (1,000 AF) as of 1/02/2006 midnight								
Reservoir	River	Storage	Avg Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	2,061	1,682	123	2,448	84	---	387
Shasta Lake	Sacramento	3,867	2,916	133	4,552	85	614	685
Lake Oroville	Feather	2,849	2,304	124	3,538	81	61	689
New Bullards Bar Res	Yuba	796	532	150	966	82	0	170
Folsom Lake	American	652	482	135	977	67	329	325
New Melones Res	Stanislaus	2,046	1,315	156	2,420	85	76	374
Don Pedro Res	Tuolumne	1,753	1,317	133	2,030	86	63	277
Lake McClure	Merced	717	454	158	1,025	70	42	308
Millerton Lake	San Joaquin	348	281	124	520	67	-46	172
Pine Flat Res	Kings	559	436	128	1,000	56	-82	441
Isabella	Kern	252	148	170	568	44	82	316
San Luis Res	(Offstream)	1,921	1,432	134	2,039	94	---	118

The latest NWS Climate Prediction Center long-range weather forecast maps for January 2006, issued December 30, suggest above average precipitation for almost all of Northern and Central California. In addition, northern portions of Southern California are included in the above average category. Other regions in California are forecast to have average rainfall. Below average rainfall is expected in large areas of the American Southwest. Temperatures are forecast to be above normal for all of the central and western United States.

DWR RESPONSE TO DECEMBER 2005 AND JANUARY 2006 HIGH WATER INCIDENTS

Following a series of forecasts by DWR and National Weather Service staff, on December 27, the Chief of Flood Operations Branch declared a Flood Alert activating the State-Federal Flood Operations Center. This began DWR's response to a series of powerful late December rainstorms that drenched Northern California, causing high flows in all major North State rivers and extensive flooding on the Napa and Russian rivers.

As storms intensified and rivers rose, citing high Delta tides and wet weather forecasts, on December 29 DWR Director Lester Snow declared the Department to be mobilized on an emergency basis. This allowed the Flood Operations Center to recruit staff from throughout DWR.

Dozens of DWR employees worked around the clock (in two 12-hours shifts) forecasting and monitoring river flows, operating reservoirs for flood safety, patrolling levees, coordinating with local reclamation districts and public safety officials, and conducting flood fights with the help of California Conservation Corps and Department of Forestry crews and reclamation district staff.

The Sacramento River flood control system performed well and, while overflow occurred along some rural portions of the Sacramento River above Ord Ferry and through Moulton, Colusa, Tisdale, and Fremont Weirs for several days, the lower leveed main stem of the Sacramento River remained below flood stage throughout the event.

On December 31, the Sacramento River reached 27.5 feet elevation at Sacramento's I Street Bridge (flood stage is 31 feet) and forecasts called for a continued rise. As a result and in accordance with standard operating procedures, DWR on December 31 opened gates on the Sacramento Weir for the first time since 1998, spilling excess flows into the already surging Yolo Bypass.

The Delta was stressed with high tides and huge runoff from the river and bypass. High winds, gusting above 50 mph, and choppy waves, contributed to levee overtopping. The Delta-Suisun Marsh Office was assigned to coordinate with local agencies to address multiple levee breeches and overtopping on Van Sickle and Simmons-Wheeler

Islands. Twitchell Island in Southern Sacramento County was evacuated New Year's Day on orders of local officials, due to overtopping. Swift work by DWR and CCC crews stabilized Twitchell Island by January 3 and the evacuation order was lifted on January 4. More than 25 other Delta incidents were recorded, with boils, seepage and levee problems stabilized by DWR, CCC, and levee maintaining agency teams.

The Department also provided technical assistance and support on approximately 30 incidents throughout the Central Valley outside the Delta, mostly related to boils, seepage, erosion and sloughing. The Department requested U.S. Army Corps of Engineers technical assistance through Public Law 84-99 for incidents in RD 38, RD 900, RD 1000 and RD 1001. Overtopping resulted in a flood fight conducted by DWR's Sutter Maintenance Yard on Cherokee Canal in State Maintenance Area 13 and the Sacramento Maintenance Yard conducted a flood fight along Cache Creek near the Town of Yolo due to the potential for overtopping. There was one reported levee breach on the Consumnes River Overflow Channel that was ultimately considered to be a local or county maintenance issue.

The Governor paid visits to two storm-affected areas---flood-ravaged communities along the Russian and Napa rivers on January 2 and the Natomas Cross Canal (RD 1001), north of Sacramento, on January 3. On both trips he spoke of the need to strengthen California's levee and flood protection system. As of January 3, the Governor had issued proclamations declaring 23 of California's 58 counties disaster areas due to flood impacts.

California news media devoted extensive coverage to the storm series and floods, most severe and widespread since those of 1998. DWR officials and their flood alert partners in the National Weather Service held frequent news briefings for the news media, including two press events per day during the three-day New Year's holiday weekend. Information Officers handled hundreds of media inquiries from throughout California and across the nation.

With improved weather conditions, receding rivers and reservoirs, and stabilization or completion of most Department-assisted flood fight incidents, the Flood Operations Center was deactivated on Monday January 9, 2006 from twenty-four hour status. Emergency operations slowly transitioned to non-emergency levee rehabilitation and maintenance support.

In the aftermath of this high water event, the Department is evaluating the flood experience and reviewing the flood management system for areas needing improvement. This evaluation will result in an After Action Report to be used for future planning and enhanced preparation.

DWR's total preliminary mobilization, damage and repair assessment cost is estimated to be about \$5.3 million. This extremely preliminary cost estimate is subject to change

as the Department captures all known associated costs in the cost accounting system along with updated damage and repair costs once current high water levels continue to drop to normal operating levels. The estimate includes emergency protective measures & emergency response activities (flood fighting, technical assistance, levee patrols, etc.) and \$1,000,000 in State Water Project costs associated with the Roaring River levees repairs.

Overall the partnership among local, State and federal agencies worked very well for responding to the late December and early January 2006 storms.

TAUM SAUK RESERVOIR BREACH

In the early morning darkness of December 14, 2005 about 4,600 acre-feet of water poured through a 200-yard-wide section of the northwest wall of upper Tatum Sauk Reservoir in Missouri. The torrent smashed into the home of Jerry and Lisa Tops, demolishing the house and sweeping the couple and their three young children into a patch of trees about a quarter mile distant.

The failure is under investigation. The suspected cause is an instrumentation glitch that allowed water to be pumped into a nearly full reservoir, which eventually overtopped and washed out a section of the dam.

Reservoir Facts:

- Location of the reservoir: Reynolds County, MO, about 125 miles southwest of St. Louis
- Date & time of the breach: December 14, 2005, 5:30 a.m. CST
- Location of the breach: northwest end of the reservoir
- Size of the breach: about 200 yards wide, 70-80 feet high
- Amount of water released: approximately 1.5-billion gallons (4,600 AF)
- Time for reservoir to drain: 12 minutes
- Flood path: down the western slope of Profit Mountain and into the east fork of the Black River, in the Johnson Shut-Ins State Park
- Pre-failure reservoir level: 90 feet (5:12 a.m.)
- Post-failure reservoir level: 20 feet (5:24 a.m.)
- Dam owner: Ameren UE
- Dam regulator: FERC
- Age of reservoir: 42 years
- Date built: 1963
- In 1965, the Tatum Sauk upper reservoir lost up to 36,000,000 gallons a day from seepage.
- In November 2004, the reservoir was lined with geosynthetic fabric to reduce seepage.

Inspectors were "shocked" to find fill in the reservoir wall. Inspectors tell the Associated Press that the area that collapsed was filled with soil and small rocks. For decades, says Chief Dam and Reservoir Inspector James Alexander, inspectors assumed the main material was granite. Ameren UE says it will address Alexander's concern as part of its investigation.

The investigation into the massive reservoir breach so far points to a computer malfunction, say officials with Ameren UE, the company that operates the power plant at Taum Sauk. During the overnight hours, the plant is run remotely from operations at the Lake of the Ozarks. The company uses computer equipment to monitor how much water is to be pumped to the upper reservoir from a lower reservoir at night, when energy demand is low. During the day, the water from the upper reservoir flows back down into the lower reservoir, generating electricity from turbines. Company officials believe the computer indicated the upper reservoir needed more water, when it was, in fact, full. More water was pumped up, causing the reservoir to overflow, putting more pressure on the wall, and causing it to collapse.

Officials at the Federal Energy Regulatory Commission said the plant and reservoir were inspected in August and found to be properly operated and maintained.

Gov. Blunt signed two State of Emergency Disaster Executive Orders that authorize state agencies and the Missouri National Guard to respond to the area.





INTERAGENCY FLOOD MANAGEMENT COLLABORATIVE PROGRAM

In a February 22, 2005 letter, Director Lester Snow requested various local, State, and federal agencies' participation in a collaborative process to examine the issues and develop solutions to the complex environmental compliance requirements and resource opportunities involving the maintenance of California's flood control infrastructure. Activities associated with this initiative commenced on August 22, 2005 when key personnel from ten separate agencies convened. During the ensuing discussions, it was agreed that a collaborative program was warranted and all the key agencies agreed to participate in a multilevel facilitated effort expected to last on the order of two years. Participating agencies include the following:

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Agency
- National Marine Fisheries Service
- California Department of Fish and Game
- Central Valley Regional Water Quality Control Board
- State Reclamation Board
- Central Valley Flood Control Association
- California Department of Water Resources

Three levels of agency participation will be required. Agency leaders will meet one to two times a year to review overall progress and direction, provide policy guidance, resolve disputes, and celebrate achievements. A management level group composed of senior level personnel will get together monthly to develop short term, intermediate, and long term actions to more systematically and effectively manage the Central Valley's flood control system. Finally, as directed by the management level group, technical staff from various agencies will be assigned specific tasks that advance the mission and goal of the agencies participating in the process.

During the monthly management level meetings that have occurred subsequent to the initial August meeting, participants have discussed and developed better understanding of: project purpose, the roles and responsibilities of participating agencies, legal requirements associated with operation and maintenance of federal flood control projects, State as well as federal environmental compliance obligations and options, as well as flood control project maintenance needs. Currently the group is developing specific projects that if implemented will improve the way we do business to reduce the public's exposure to risks from flooding while incorporating appropriate environmental resource protection and enhancement. Three areas of projects have been proposed: sediment removal projects in bypasses (Tisdale and Yolo at Freemont Weir) and along stream channels (Butte Creek), vegetation management in river channels (Feather River between Yuba City and the Bear River), and erosion repairs (throughout the SRFCP). A preliminary work plan for the vegetation management project will be developed in the coming weeks and will be presented to the management group at the next meeting scheduled for January 18th, 2006. The group is expected to tackle additional projects over the course of the coming months as available resources allow.

BUDGET

The Division of Flood Management submitted its 2nd year of a 3 year Flood Management Comprehensive Strategic Plan Budget Change Proposal for FY 06-07. The proposal, which has the Department of Finance's approval for inclusion to the Governor's Budget is as follows:

- 32 new positions and \$38,160,000. This amount includes \$35,705,000 in General Funds, \$1,000,000 in Proposition 50 State Operations funds, \$460,000 in Proposition 13 State Operation funds, and \$995,000 in Delta Flood Protection Local Assistance funds.
- Capital Outlay Proposals for FY 2006-07 approved by the Department of Finance for inclusion to the Governor's Budget are:
 - ❖ Folsom Dam Modifications: \$14,415,000 General Fund and \$5,004,000 in Reimbursements

- ❖ American River Common Features: \$6,440,000 in General Funds and \$2,715,000 in Reimbursements
- ❖ Sacramento River Bank Protection Project: \$4,920,000 in General Funds
- ❖ American River Watershed, Folsom Dam Raise Bridge Element \$4,755,000 in General Funds and \$2,007,000 in Reimbursements
- ❖ American River Flood Control – Natomas Features \$496,000 in General Funds
- ❖ Upper Sacramento Area Levee Reconstruction \$357,000 in General Funds and \$127,000 in Reimbursements

YUBA FEATHER FLOOD PROTECTION PROGRAM

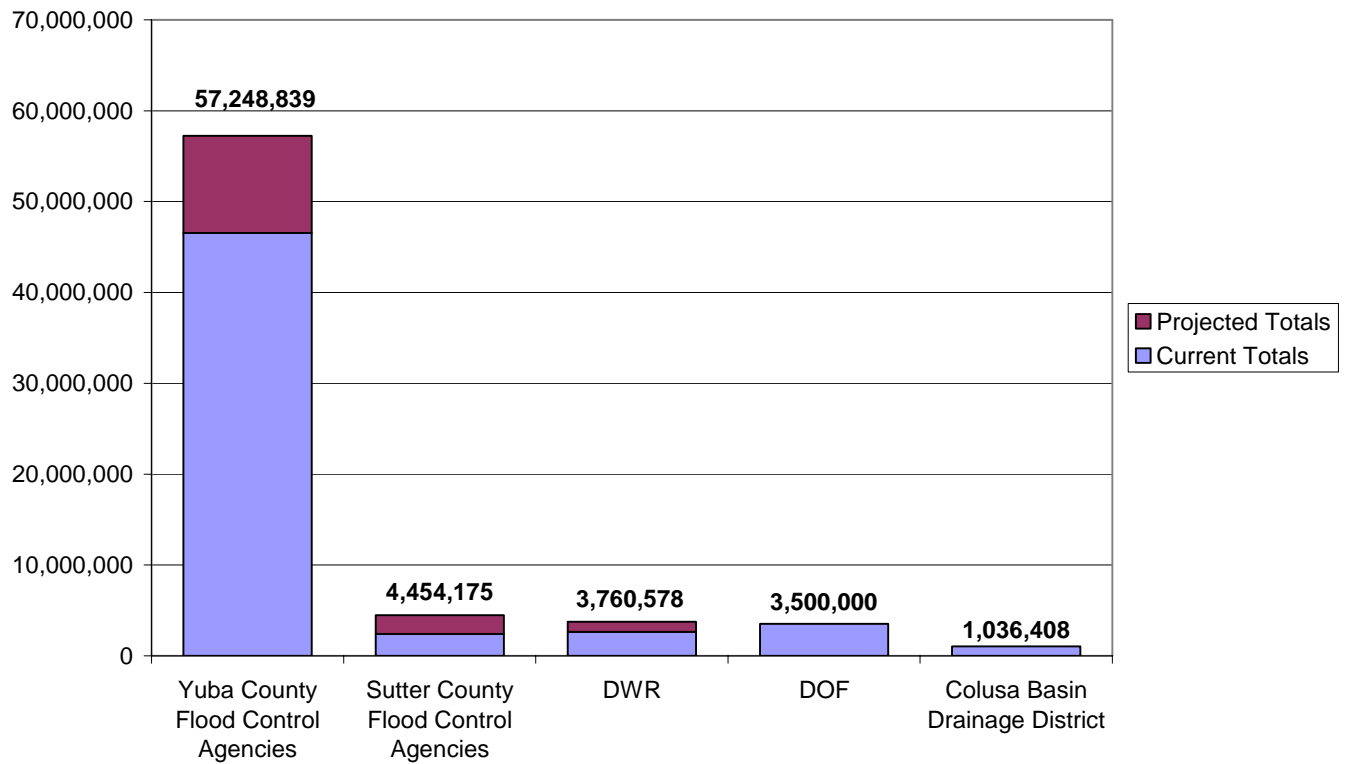
Last month's report provided the status of the distribution of the funds at that time. At that time, there were two grant applications competing for the \$11 million in remaining funds. Since then, DWR staff has determined that \$12,099,108 of the authorized \$70 million is available to be granted under general grants. Also since the last report, DWR staff and management did extensive research and coordination (both internally and with the local agencies) and decided to distribute the remaining \$12.1 million as follows:

1. \$1.4 million to Sutter County for a feasibility study grant to support its Sutter County Feasibility Study with the Corps;
2. \$2.1 million to TRLIA for a second amendment to its Phase II design grant under the Yuba Feather Program; and
3. \$8.6 million to TRLIA for an implementation grant for Unit 2 of its Bear-Feather Rivers Levee Setback

DWR has informally notified both Sutter County and TRLIA of its decision, and both parties are satisfied with DWR's proposed allocation of the remaining funds. A bar chart showing the allocations follows.

Final Distribution of Yuba Feather Funding

(as proposed on December 23, 2005)



FLOOD PROTECTION AND CLEAN, SAFE, RELIABLE WATER SUPPLY BOND AND FINANCING ACTS OF 2006 AND 2010

In early January, the Department sponsored two new bond bills that have been introduced by Senator Aanestad (SB 1166) and Assemblyman Laird (AB 1839).

Flood Control

The proposed 2006 bond will provide \$1 billion over the next five years to pay for Flood control system repairs and improvements, upgrade flood protection for urban areas, improve emergency response capabilities, and develop a new vision for the long-term protection of the Delta. The 2010 bond will provide an additional \$1.5 billion for these programs.

	2006	2010
Repair of State-Federal Project Levee and Facilities	\$210 million	\$300 million
Flood Control and Levee System Improvements	\$200 million	\$200 million
Delta Levee Subventions and Special Projects	\$210 million	\$700 million
Flood Control Subventions	\$250 million	\$200 million
Floodplain Mapping	\$ 90 million	\$ 0
Floodway Corridor Program	\$ 40 million	\$100 million
TOTAL	\$ 1 billion	\$ 1.5 billion

Key projects include:

- Remapping more than one million acres of Central Valley floodplains
- Repairing State-Federal Project Levees
- Initiating seismic strengthening of critical Delta levees
- Improving flood protection for urban areas including modifications of Folsom Dam to provide Sacramento with 200-year flood protection
- Fully funding the backlog of the State's share for flood control projects outside of the Central Valley

Water Management

The 2006 bond provides \$2 billion over the next five years to improve water management activities in all regions of the State. The funds will be used for projects, including those described in the California Water Plan, that reduce water demand and increase water supplies, improve water quality and promote good stewardship of our natural resources. The 2010 bond will provide an additional \$4.5 billion.

	2006	2010
Regional Water Management Grants	\$ 1 billion	\$ 2 billion
Water Quality Improvements	\$250 million	\$500 million
State Support for Development of New Water Storage	\$250 million	\$ 1 billion
Water Resources/Quality Science and Technology	\$300 million	\$500 million
Resource Stewardship and Ecosystem Restoration	\$200 million	\$500 million
Total	\$ 2 billion	\$ 4.5 billion

Key projects include:

- Financial support for integrated regional water management plans
- Funding for projects that benefit the water supply and water quality needs of disadvantaged communities
- Water quality improvements achieved with pollution prevention strategies and groundwater cleanup projects
- Development of groundwater storage and surface storage projects to protect fisheries, improve water quality and provide additional flood control capacity
- Advancements in desalination, water science and technology to address climate change impacts, energy issues associated with water, and environmental concerns

The bills include a new Water Resources Investment Fund, which will provide a stable and sustained source of revenue to improve water quality and meet water supply needs now and in the future.

Potential elements of a Water Resources Investment Fund:

- The Water Resources Investment Fund establishes a fee that will be collected from each retail water supplier in the state. The supplier will decide how to apportion the fee among its customers and will collect the fee.
- Provides a stable funding source for clean, reliable and safe water supplies. The funds will support water management activities described in the California Water Plan. A significant amount of the funds will pay for water quality improvements.
- Fifty percent of the funds collected in each region will be returned to those respective regions to plan and carry out integrated regional water management. Additional funds are reserved to match federal water quality grants, fund priority regional projects, and carry out emergency response to groundwater contamination. Through these programs, more than two-thirds of all funds collected will be used to fund regional water management projects.

- A designated entity, such as a reconfigured California Water Commission, will oversee distribution of funds and recommend any changes or improvements to the Fund and fee structure.
- The funds available to implement water management projects will increase over time as new connections are added.
- Regions will prepare integrated regional water management plans consistent with the California Water Plan to meet their local needs, and fund their projects from their regional accounts.
- Remaining funds will pay for programs of statewide significance, including funding for the public trust benefits of new surface storage projects such as ecosystem restoration and flood control.